

**Particles for selective removal of metal complex anions from aq. soln.
- has ion-pairing agent dispersed in aq. phase which is present in a gel
or encapsulated**

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Equivalents:

Abstract

Particulate agent for selective removal of metal complex anions (I) from aq. soln. comprises an ionic, non-polymeric agent (II), able to form ion pairs with (I), dispersed in a continuous aq. phase which is embedded in a hydrophilic gel, and/or a component of such a gel and/or encapsulated in a water-insoluble, ion-permeable covering.
specifically (II) is an amine salt of formulae $(R_1, R_2NH_2)+x-$ or $(R_1R_2R_3NH)+X-$ R_1, R_2 and $R_3 = 6-20C$ alkyl (opt. substd. by OR_4 or SR_4) or aryl (esp phenyl) opt. substd. by 1-3 lower alkyl (esp. me), $x =$ residue of organic or inorganic acid, pref. sulphate, nitrate or halide, esp. chloride.
- The agent pref. comprises (by wt.) 0.5-30% gel forming agent, 1-50% (II); 0-40(10-30)% water-insol. solvent; 0-10% auxiliaries and 40-90% water. Partic. the continuous aq phase is embedded in a thermally-crosslinked gel and encapsulated by a covalently-crosslinked gel. The particles are of dia. 0.1-6(esp. about 15)mm.
USE/ADVANTAGE - The method is used to remove (I) for environments protection or recovery of valuable metals. The particulate agent provides better selectivity, ease of handling and efficiency compared with liq-liq extn. processes. The particles have high mechanical stability, provide a large exchange surface and are easily sped. from soln.